

IN THE CLAIMS

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Previously presented) A paper discharge unit used with an inkjet printer which ejects a sheet of paper on which image printing is completed by an ink cartridge having a nozzle part out of a printer main body, comprising:

a paper discharge roller rotatably mounted in the printer main body, to feed the sheet out of the printer main body; and

a paper discharge guide disposed between the paper discharge roller and a paper discharge opening which is formed in one side of the printer main body, the paper discharge guide guiding a front end of the sheet upward just after the front end is ejected from the paper discharge roller so as to prevent a rear end portion of the sheet from being lifted toward the nozzle part of the ink cartridge.

2. (Previously presented) The paper discharge unit as claimed in claim 1, wherein the paper discharge guide has an upper end portion which is placed higher than contact surfaces of the paper discharge roller and the sheet.

3. (Canceled)

4. (Previously presented) A paper discharge unit used with an inkjet printer which ejects a sheet of paper on which image printing is completed by an ink cartridge having a nozzle part out of a printer main body, comprising:

a paper discharge roller rotatably mounted in the printer main body, to feed the sheet out of the printer main body; and

a paper discharge opening formed in one side of the printer main body; and

a paper discharge guide adjacent to the paper discharge opening and protruding from an outer wall of the printer main body, the paper discharge guide having an upper end portion which is placed higher than contact surfaces of the paper discharge roller and the sheet,

wherein the paper discharge guide guides a front end of the sheet upward just after the front end is ejected from the paper discharge opening so as to prevent a rear end portion of the sheet from being lifted toward the nozzle part of the ink cartridge.

5. (Currently amended) A paper discharge unit used with an inkjet printer which ejects a sheet on which image printing is completed by an ink cartridge having a nozzle part out of a printer main body, comprising:

a paper discharge roller rotatably mounted in the printer main body, to feed the sheet out of the printer main body;

a paper discharge guide pivotably mounted downstream ofbetween the paper discharge roller and a paper discharge opening which is formed in one side of the printer main body in a direction the sheet is fed, to guide the bottom face of the sheet ejected from the paper discharge roller; and

a driving unit to pivot the paper discharge guide in order for an upper end portion of the paper discharge guide to be disposed higher than a contact surface between the paper discharge roller and the sheet as the sheet is discharged from the paper discharge roller.

6. (Original) The paper discharge unit as claimed in claim 5, wherein the driving unit includes:

a support member supporting the paper discharge guide;

rotating members rotatably mounted on the printer main body, and supporting the support member; and

a rotating unit rotating the rotating members so the paper discharge guide ascends and descends in association with sheet feeding.

7. (Currently amended) The paper discharge unit as claimed in claim 6 A paper discharge unit used with an inkjet printer which ejects a sheet on which image printing is completed by an ink cartridge having a nozzle part out of a printer main body, comprising:

a paper discharge roller rotatably mounted in the printer main body, to feed the sheet out of the printer main body;

a paper discharge guide pivotably mounted downstream of the paper discharge roller in a direction the sheet is fed, to guide the bottom face of the sheet ejected from the paper discharge roller; and

a driving unit to pivot the paper discharge guide in order for an upper end portion of the paper discharge guide to be disposed higher than a contact surface between the paper discharge roller and the sheet as the sheet is discharged from the paper discharge roller,
wherein the driving unit includes:

a support member supporting the paper discharge guide;

rotating members rotatably mounted on the printer main body, and supporting the support member; and

a rotating unit rotating the rotating members so the paper discharge guide ascends and descends in association with sheet feeding, wherein and the rotating unit includes:

 a first gear rotatably supported by a first rotation shaft on one interior side of the printer main body, and receiving a driving force to rotate; and

 second gears mounted on a second rotation shaft to rotatably support the rotating members on one interior side of the printer main body, and to rotate the rotating members in association with rotations of the first gear.

8. (Original) The paper discharge unit as claimed in claim 7, wherein the second gears directly mesh with the first gear.

9. (Original) The paper discharge unit as claimed in claim 8, wherein the first gear alternately rotates forward and reverse corresponding to positions of the sheet as the sheet is fed.

10. (Original) The paper discharge unit as claimed in claim 9, wherein the second gears are sector gears rotating by a certain rotation angle in association with the rotations of the first gear.

11. (Original) The paper discharge unit as claimed in claim 10, wherein the second gears are formed in one body with the rotating members.

12. (Original) The paper discharge unit as claimed in claim 11, wherein the paper discharge roller is mounted on the first rotation shaft to rotate in association with the rotations of the first gear.

13. (Original) The paper discharge unit as claimed in claim 7, further comprising a

power transmission unit to transmit a driving force from the first gear to the second gears.

14. (Original) The paper discharge unit as claimed in claim 13, wherein the first gear alternately rotates forward and reverse corresponding to positions of the sheet as the sheet is fed.

15. (Original) The paper discharge unit as claimed in claim 14, wherein the power transmission unit is a swing gear assembly interactably connecting the first gear and the second gears.

16. (Original) The paper discharge unit as claimed in claim 15, wherein the swing gear assembly includes:

a pivot member rotatably mounted on the first rotation shaft of the first gear; and
third and fourth gears spaced from each other and rotatably mounted on the pivot member, and meshed with the first gear respectively, the pivot member rotating by the third and fourth gears meshed with the first gear as the first gear rotates, and the second gears selectively meshed with one of the third and fourth gears corresponding to rotations of the pivot member.

17. (Original) The paper discharge unit as claimed in claim 16, wherein the second gears are sector gears rotating by a certain rotation angle in association with rotations of the first gear.

18. (Original) The paper discharge unit as claimed in claim 17, wherein the third and fourth gears are multi-stepped gears each having a first gear part meshed with the first gear and a second gear part selectively meshed with the second gear upon the rotations of the pivot member.

19. (Original) The paper discharge unit as claimed in claim 18, wherein the second gears are mounted side by side in plural on a second rotation shaft member, and each of the second gears is selectively meshed with the third and fourth gears respectively as the pivot member rotates.

20. (Original) The paper discharge unit as claimed in claim 19, wherein the second gears are formed in one body with the rotating members.

21. (Original) The paper discharge unit as claimed in claim 19, wherein the second gears, support member, rotating members, and paper discharge guides are formed in one body.

22. (Original) The paper discharge unit as claimed in claim 7, wherein the first gear is connected through sheet feeding rollers rotatably mounted upstream of the ink cartridge in the direction the sheet is fed, supplying the sheet to the sheet discharge rollers and a certain gear train.

23. (Currently amended) The paper discharge unit as claimed in claim 6 A paper discharge unit used with an inkjet printer which ejects a sheet on which image printing is completed by an ink cartridge having a nozzle part out of a printer main body, comprising:

a paper discharge roller rotatably mounted in the printer main body, to feed the sheet out of the printer main body;

a paper discharge guide pivotably mounted downstream of the paper discharge roller in a direction the sheet is fed, to guide the bottom face of the sheet ejected from the paper discharge roller; and

a driving unit to pivot the paper discharge guide in order for an upper end portion of the paper discharge guide to be disposed higher than a contact surface between the paper discharge roller and the sheet as the sheet is discharged from the paper discharge roller,

wherein the driving unit includes:

a support member supporting the paper discharge guide;

rotating members rotatably mounted on the printer main body, and supporting the support member;

a rotating unit rotating the rotating members so the paper discharge guide ascends and descends in association with sheet feeding;

wherein the driving unit further includes

a guide protrusion which protrudes on one side of the support member opposite to an internal wall of the printer main body; and

a guide slit formed in the internal wall of the printer main body to guide rotations of the guide protrusion, a rotation range of the support member being limited by the guide protrusion and the guide slit.

24. (Original) The paper discharge unit as claimed in claim 23, wherein the driving unit further includes an elastic member that elastically presses the guide protrusion moved to

either of both ends of the guide slit, to thereby restrain the guide protrusion from moving to the other end of the guide slit.

25. (Original) The paper discharge unit as claimed in claim 24, wherein the elastic member is a toggle spring both ends of which are connected to the guide protrusion of the rotating member and the printer main body, respectively.

26. (Original) The paper discharge unit as claimed in claim 25, wherein the toggle spring is formed in a one end-opened annular shape, and both ends of which are rotatably connected to the guide protrusion and the printer main body, respectively.

27. (Cancelled)